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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,037	10/01/2001	Yuriy Reznik	REALNET.122A	2930

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EXAMINER
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CZEKAJ, DAVID J

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/865,037	Applicant(s) REZNIK, YURIY	
	Examiner Dave Czekaj	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 20-25 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10, 15 and 40 is/are allowed.
- 6) ☒ Claim(s) 11-14, 16-19 and 26-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1-40 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-14, 16-19, and 2-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi (5786857) in view of de Queiroz et al. (6081211), (hereinafter referred to as "Queiroz") in further view of Senior (6118890).

Regarding claims 11, 13, 34, and 39, Yamaguchi discloses an apparatus that relates to image processing (Yamaguchi: column 1, lines 5-7). This apparatus comprises "receiving a matrix of transform coefficients" (Yamaguchi: figure 1, wherein the decoder receives the transform coefficients produced by the quantization unit) and "creating a probabilistic model representing dependencies and correlations between coefficient locations and groups of coefficients from the matrix" (Yamaguchi: column 5, lines 38-42, wherein the probabilistic model is the Markov model). However, this apparatus lacks the entropy encoder and two-dimensional probabilistic model as claimed. Queiroz teaches that image compression, using an entropy encoder, can reduce the cost and time associated

with transmitting data (Queiroz: figure 3, column 1, lines 48-51). Senior teaches that previous identification systems have not achieved an adequate accuracy (Senior: column 1, lines 61-64). To help alleviate this problem, Senior discloses "creating a two-dimensional probabilistic model" (Senior: column 5, lines 3-5, wherein the probabilistic model is the Markov model). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Yamaguchi, add the entropy coder taught by Queiroz, and add the model taught by Senior in order to obtain an apparatus that operates more efficiently by being able to reduce overhead associated with transmitting data.

Regarding claims 12, 27, and 31, Yamaguchi discloses "the coefficients are discrete cosine coefficients" (Yamaguchi: column 2, lines 50-51).

Regarding claims 14 and 32, Queiroz discloses "the probabilistic model is represented by descriptors that correspond to coefficient locations and groups of coefficients" (Queiroz: column 5, lines 3-14, column 6, lines 16-30, wherein the coefficients and groups of coefficients are the DCT coefficients).

Regarding claim 16, note the examiners rejection for claims 11 and 14.

Regarding claims 17, 28, and 35, Queiroz discloses "the entropy encoding scheme is created prior to encoding by analyzing probabilities of descriptors" (Queiroz: column 5, lines 3-14, wherein the entropy encoding scheme uses a default table which is created prior to encoding).

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Regarding claims 18-19, 29-30, and 37, Queiroz discloses "the entropy encoding scheme is created/modified during the encoding" (Queiroz: column 5, lines 3-14, column 6, lines 16-30, wherein the modification is the optimizing of the entropy codes).

Regarding claim 26, note the examiners rejection for claims 11 and 16.

Regarding claim 33, Queiroz discloses "a decoding module that recreates the coefficient matrices" (Queiroz: figure 3, item 360).

Regarding claims 36 and 38, Queiroz discloses "the static/adaptive entropy code table is a Huffman code table" (Queiroz: column 5, lines 21-25).

***Allowable Subject Matter***

4. Claims 1-10, 15, and 40 are allowed.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

An Embedded HMM- Based Approach for Face Detection and Recognition; Ara v Nefian and Monson H. Hayes; IEEE 1999.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (571) 272-7327. The examiner can normally be reached on Monday - Friday 9 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Mehrdad Dastouri*  
MEHRDAD DASTOURI  
SUPERVISORY PATENT EXAMINER  
TC 2600

DJC